

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 9742 - L2 Version 3  
Chandra X-Ray Center

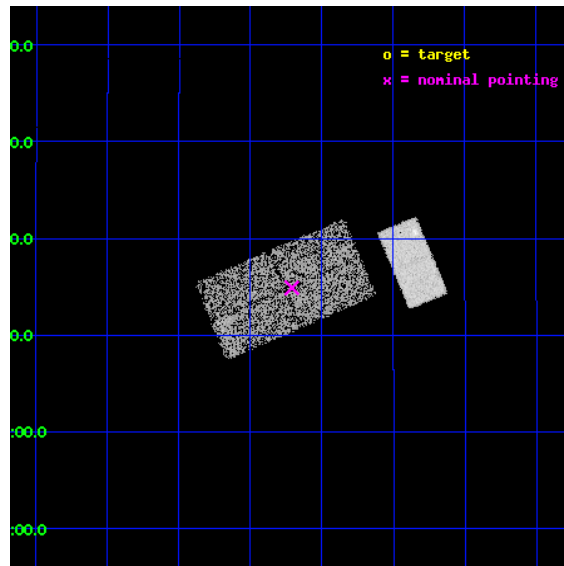
L2 Processing Date : May 10 2012

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# 1 Front

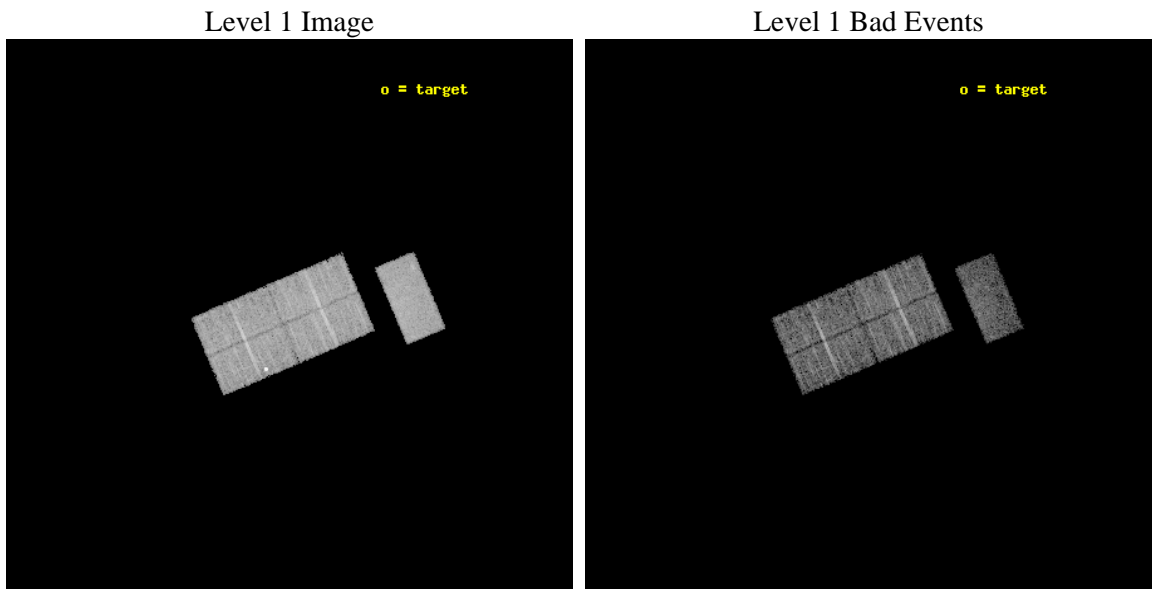
seq_num	100069	Sequence number
obs_id	9742	Observation id
title	Solar wind charge exchange induced X-rays at Venus during the Messenger flyby	Proposal title
observer	Dr. Konrad Dennerl	Principal investigator
object	Venus	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	168.733292	Observer's specified target RA [deg]
dec_targ	4.922889	Observer's specified target Dec [deg]
ra_nom	170.67763050543	Nominal RA [deg]
dec_nom	4.2482270317092	Nominal Dec [deg]
roll_nom	66.886658814673	Nominal Roll [deg]
revision	3	Processing version of data
ontime	6784.2000448704	Sum of GTIs [s]
livetime	6632.9683661228	Livetime [s]
ontime0	6784.2000448704	Sum of GTIs [s]
ontime1	6784.2000448704	Sum of GTIs [s]
ontime2	6784.2000448704	Sum of GTIs [s]
ontime3	6784.2000448704	Sum of GTIs [s]
ontime7	6784.2000448704	Sum of GTIs [s]
l2events	24201	Number of level 2 events



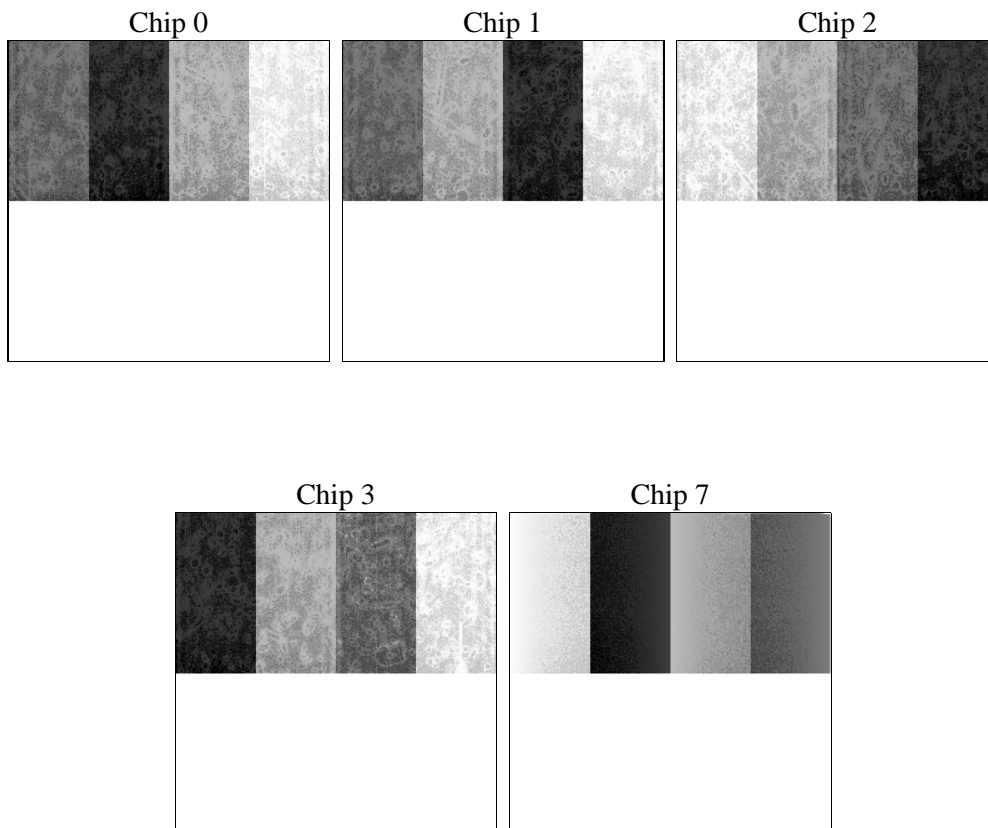
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	6600.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	6784.2000448704	Sum of GTIs [s]
caldbver	4.4.9	&#160	ontime0	6784.2000448704	Sum of GTIs [s]
date	2012-05-10T23:21:29	Date and time of file creation	ontime1	6784.2000448704	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	6784.2000448704	Sum of GTIs [s]
			ontime3	6784.2000448704	Sum of GTIs [s]
			ontime7	6784.2000448704	Sum of GTIs [s]
			l1events	159961	Number of level 1 events

### 2.1.4 Events

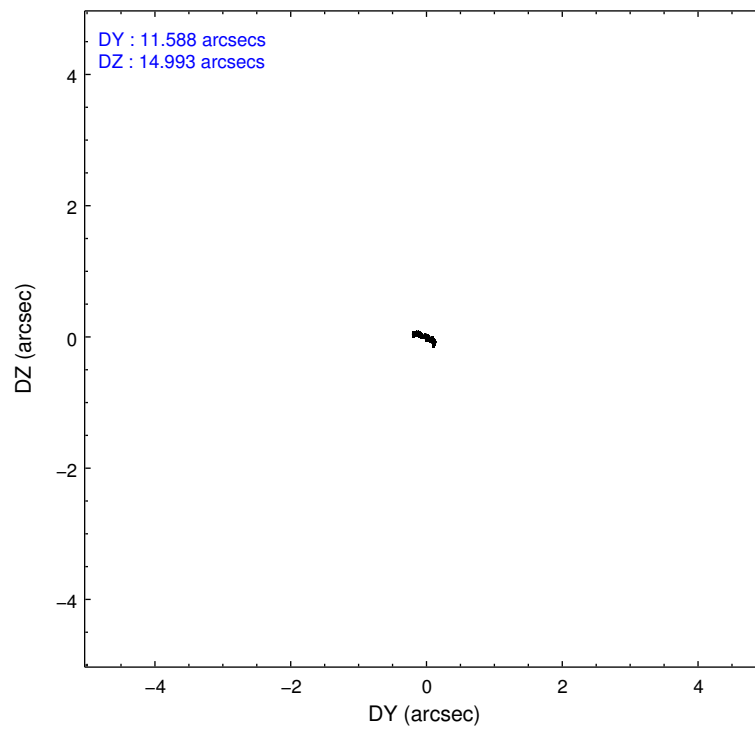
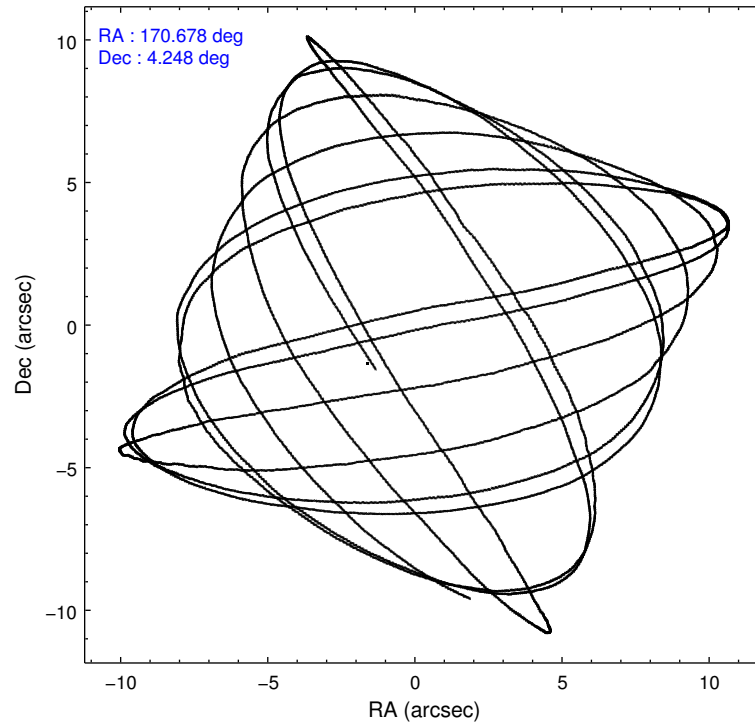
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
level 1 events	28966	30443	33624	32558	34370
rejected events	26021	25719	30572	29751	19173
rejected %	89%	84%	90%	91%	55%

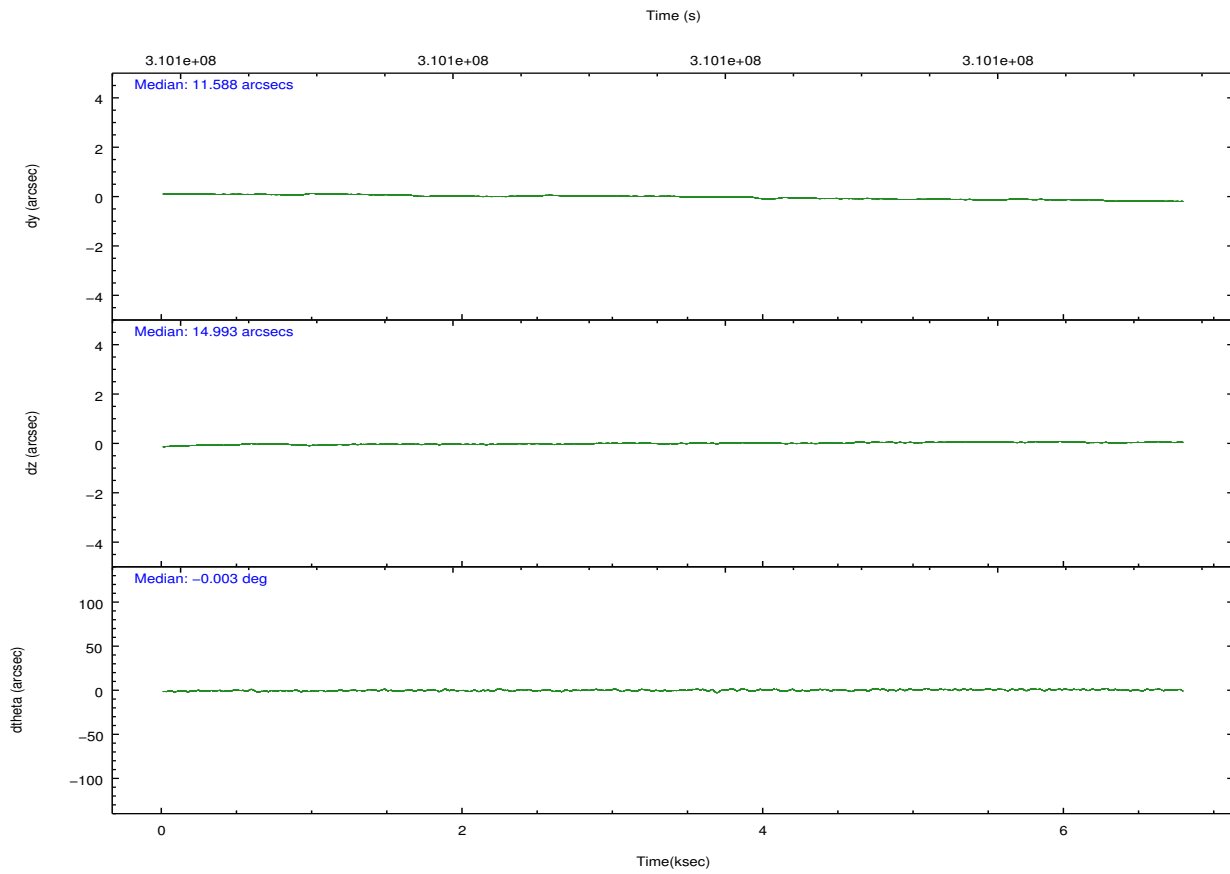
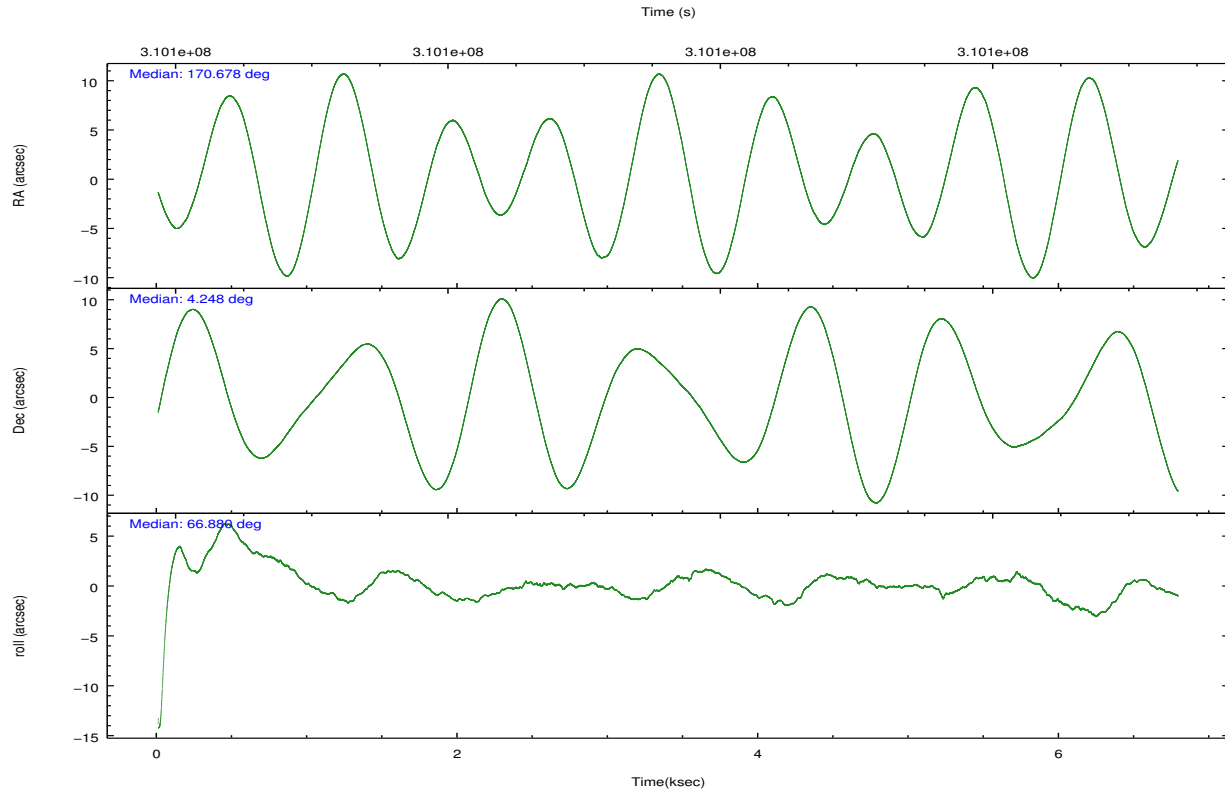
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
grade 0 events	1021	2837	1105	998	1714
	3%	9%	3%	3%	4%
grade 1 events	14	17	19	15	53
	0%	0%	0%	0%	0%
grade 2 events	735	698	702	602	3366
	2%	2%	2%	1%	9%
grade 3 events	411	417	402	386	1581
	1%	1%	1%	1%	4%
grade 4 events	383	401	423	386	1587
	1%	1%	1%	1%	4%
grade 5 events	1053	1204	1033	1231	3705
	3%	3%	3%	3%	10%
grade 6 events	567	586	547	561	7689
	1%	1%	1%	1%	22%
grade 7 events	24782	24283	29393	28379	14675
	85%	79%	87%	87%	42%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01237	ACIS-01237	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	170.681092	170.6776305054339	CCD I2 on	Y	Y
[deg] Pointing Dec	4.220864	4.24822703170919	CCD I3 on	Y	Y
[deg] Pointing Roll	66.677723	66.88665881467259	CCD S0 on	N	N
[s] Window start time (MET)	309398465.184000	309398465.184000	CCD S1 on	N	N
[s] Window stop time (MET)	310608065.184000	310608065.184000	CCD S2 on	O1	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S3 on	O2	Y
[mm] SIM defocus	0	0.001439871863259334	CCD S4 on	N	N
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S5 on	N	N
[mm] SIM translation stage offset	0	-0.005018542100998502	Number of optional ACIS chips dropped	1	1
[s] Observation start time (MET)	310096419.184000	310096042.51517	On-chip summing requested	N	N
Observation start date	2007-10-30T01:52:34	2007-10-30T01:47:22	Subarray requested	CUSTOM	1/2
[s] Observation end time (MET)	310103019.184000	310103152.94051	Subarray start row	513	513
Observation end date	2007-10-30T03:42:34	2007-10-30T03:45:52	Subarray row count	512	512
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	1.8

## 2.3 Aspect



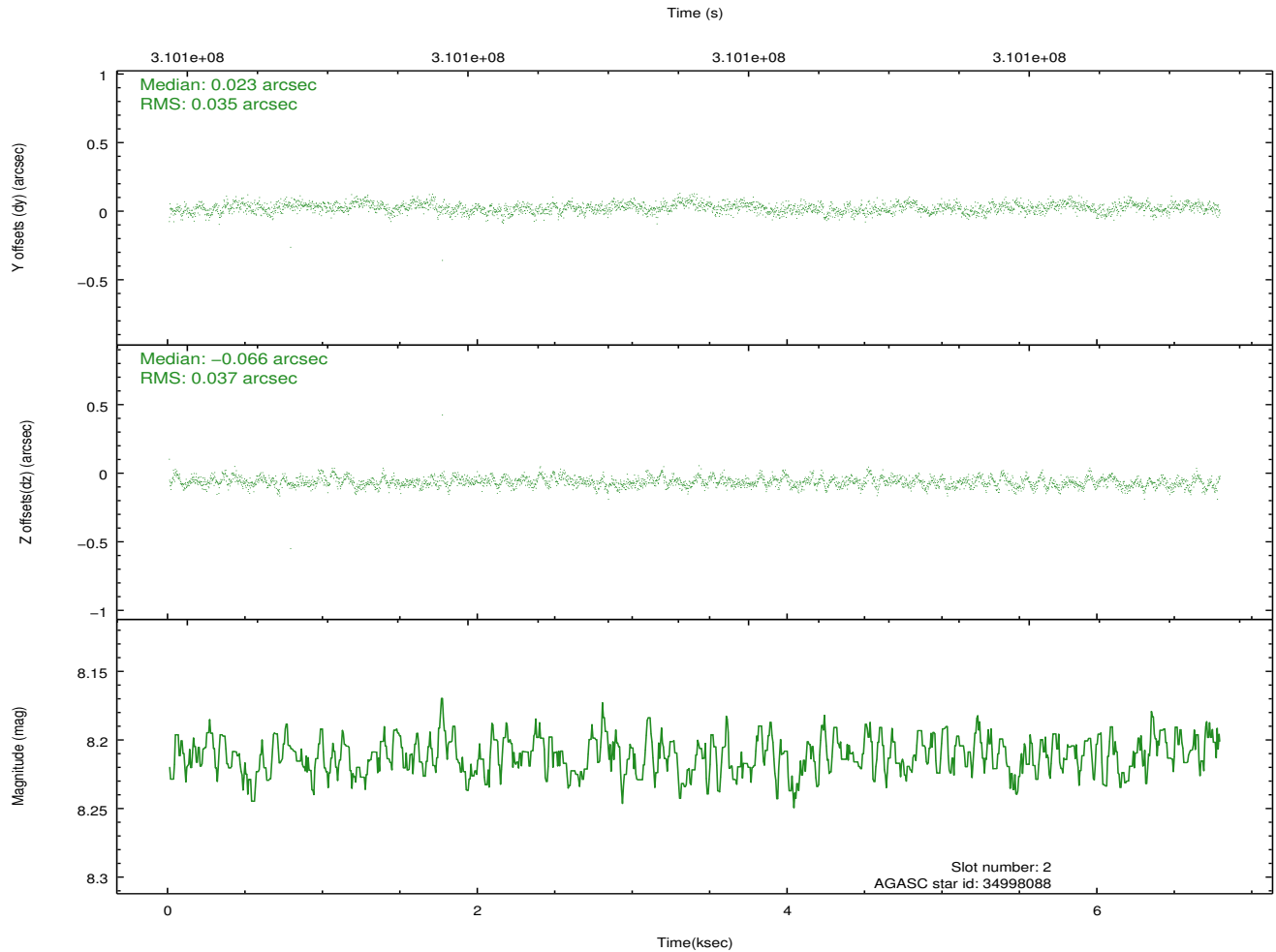
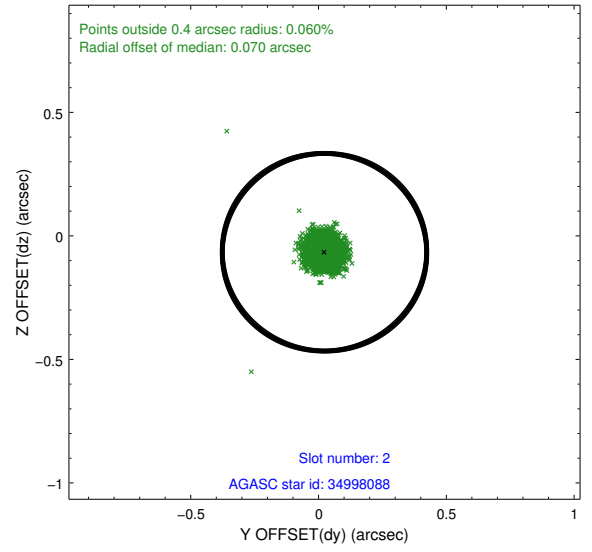
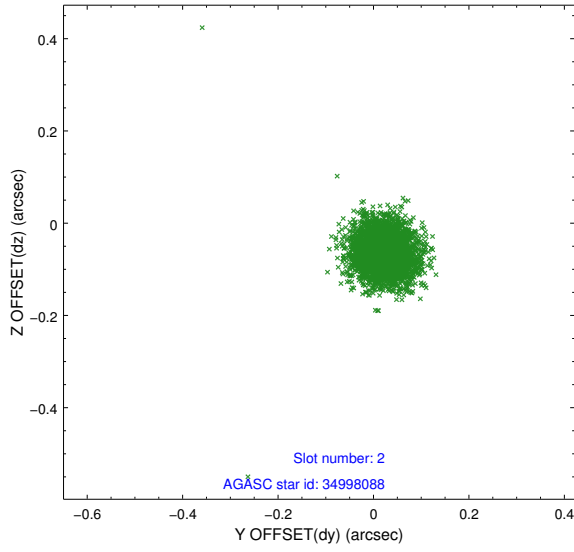


### Slot Statistics

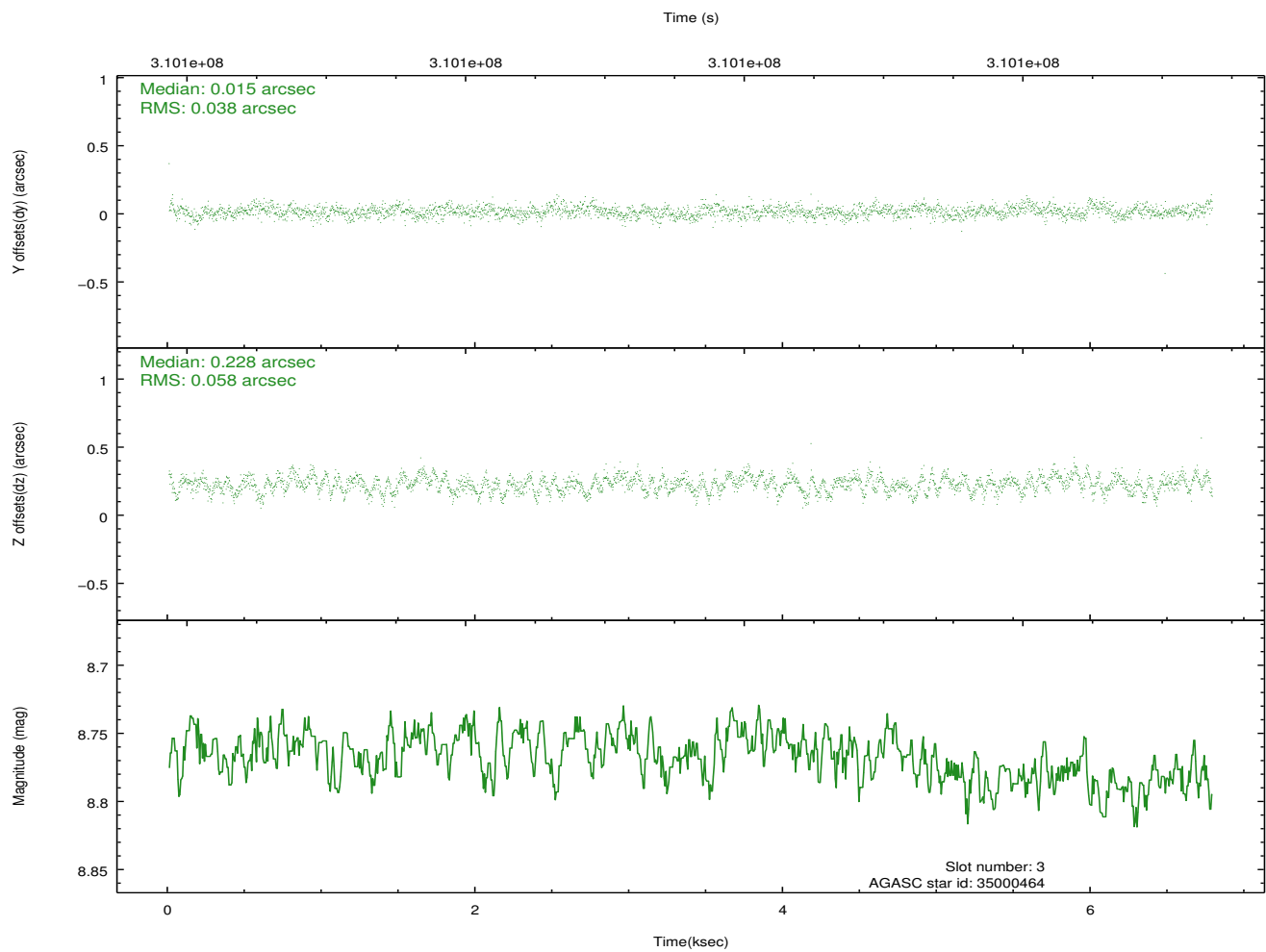
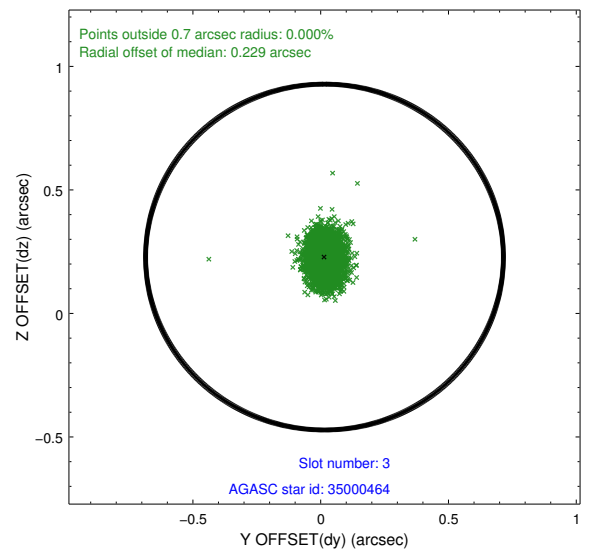
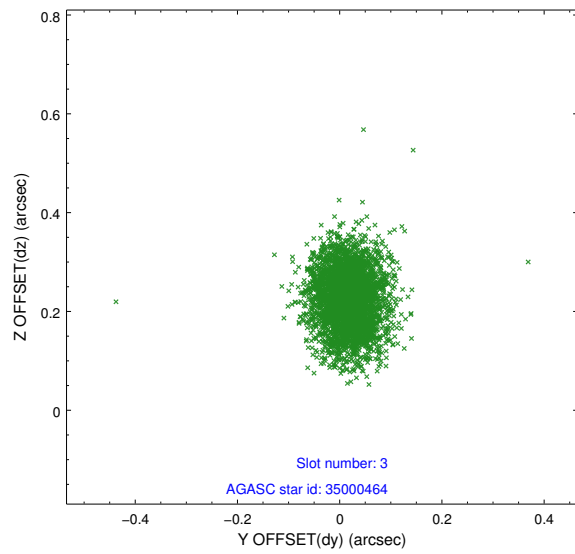
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-2	7.13	1655	0.013	-0.059	0.006	0.013	0.000000	0.000000	-766.16	-845.02
1	FID	ACIS-I-5	7.23	1655	-0.077	0.107	0.006	0.013	0.000000	0.000000	-1820.76	1058.54
2	GUIDE	34998088	8.21	3308	0.023	-0.066	0.053	0.086	170.391115	4.208300	-453.90	938.61
3	GUIDE	35000464	8.77	3310	0.015	0.228	0.073	0.120	170.965623	3.618933	-1586.06	-1795.86
4	GUIDE	35000776	7.21	3310	-0.124	-0.157	0.052	0.084	170.371940	3.937464	-1376.85	614.95
5	GUIDE	35002728	8.20	3310	0.086	-0.004	0.065	0.104	170.760736	4.138149	-160.54	-379.49
6	UNUSED		0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
7	OMITTED		0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00

## 2.4 Star Slots

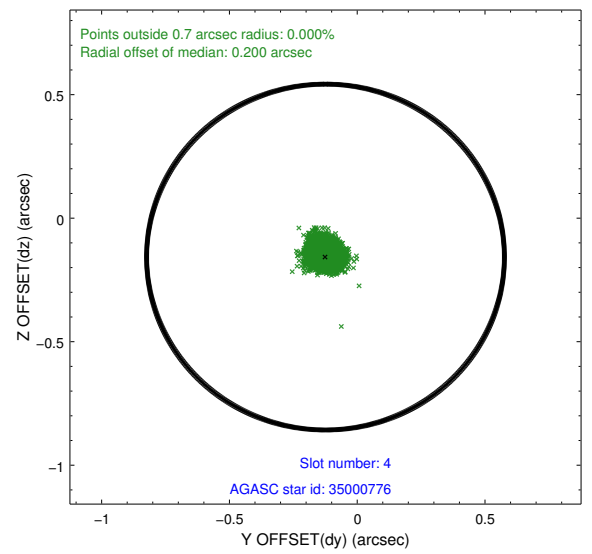
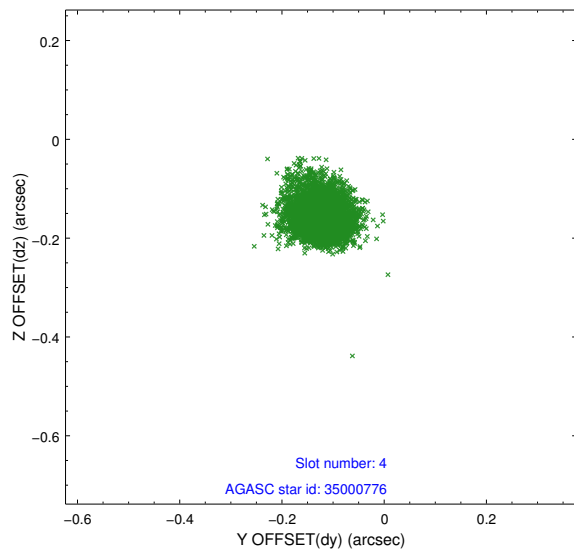
### 2.4.1 Slot 2



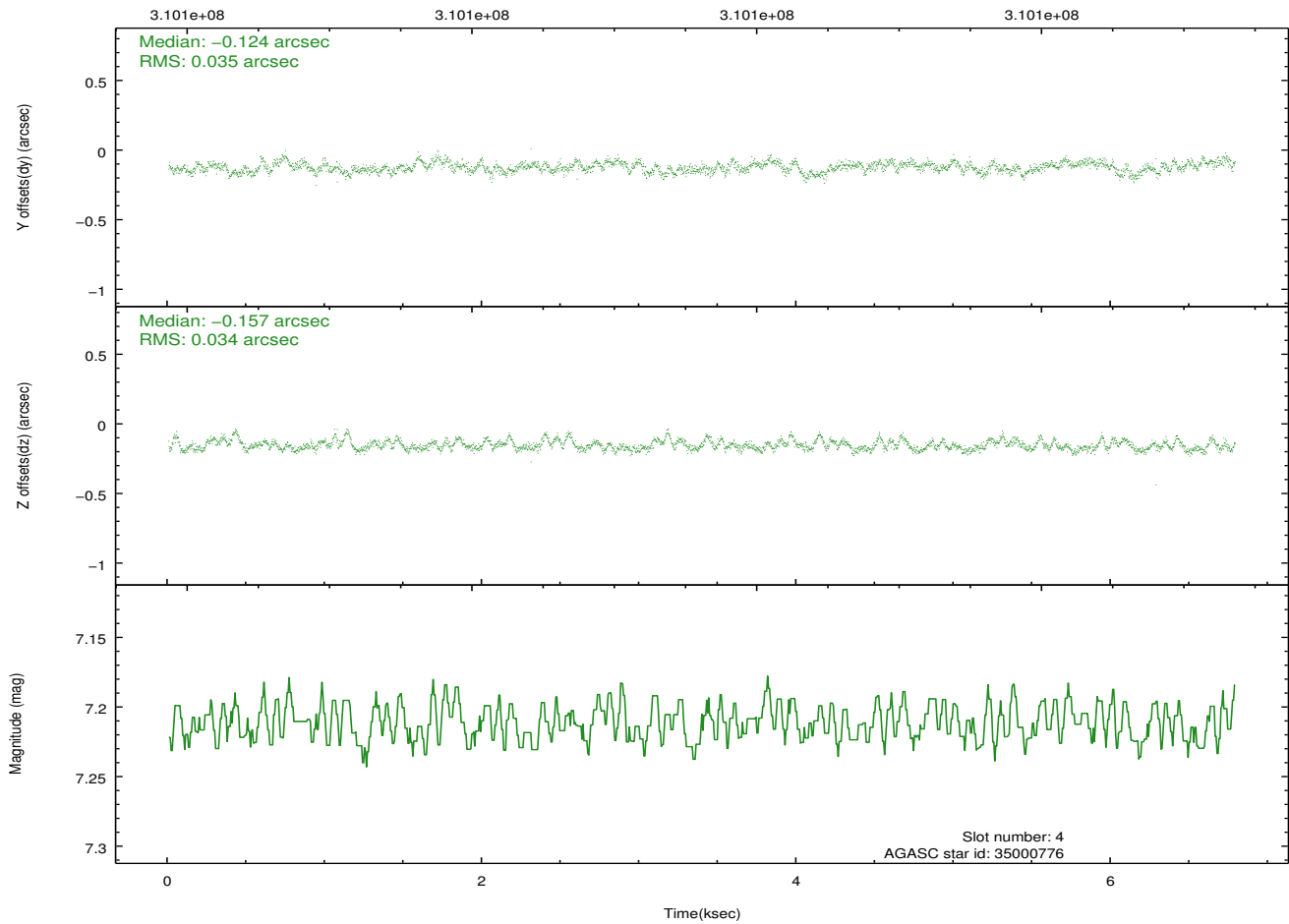
## 2.4.2 Slot 3



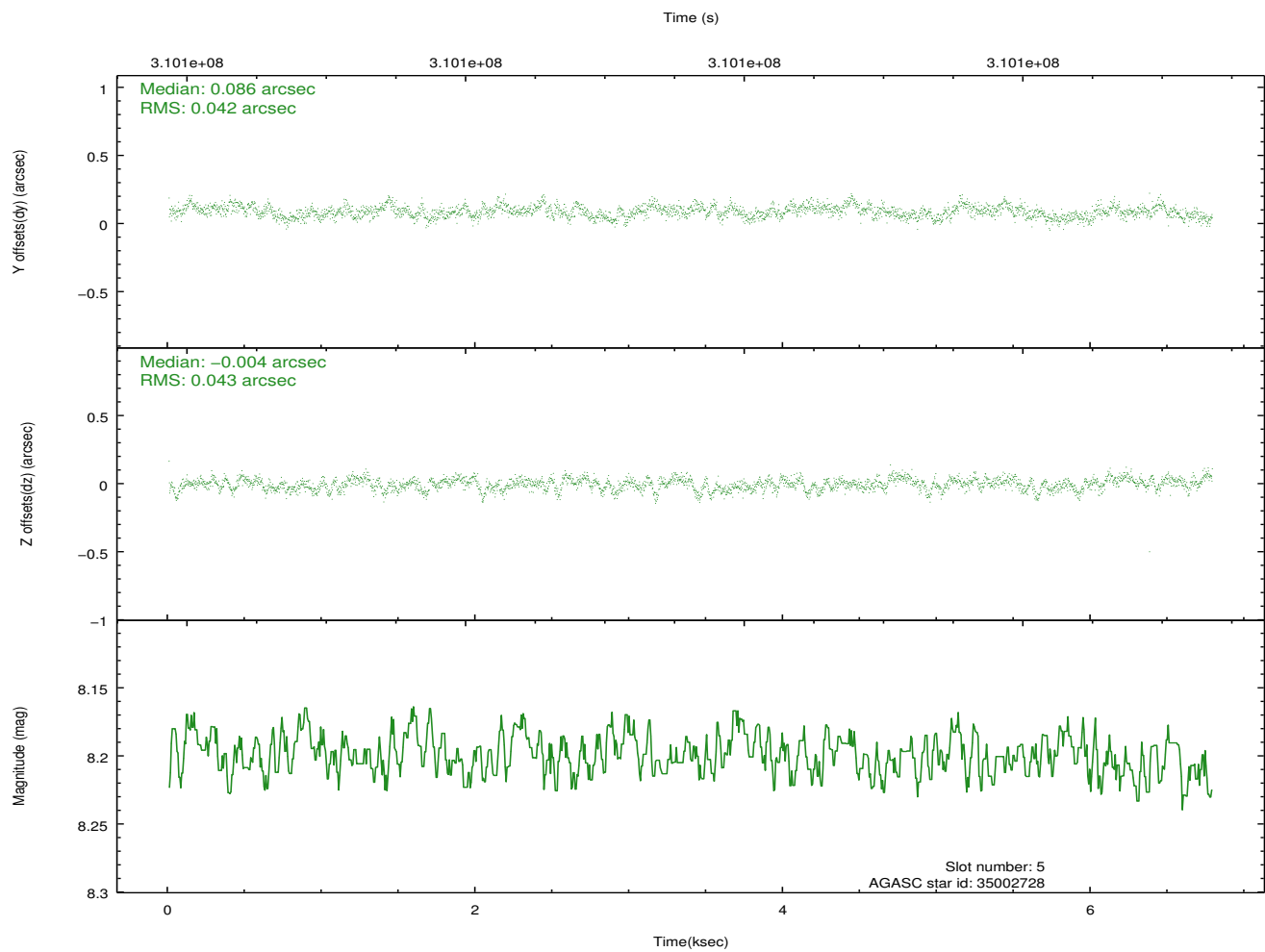
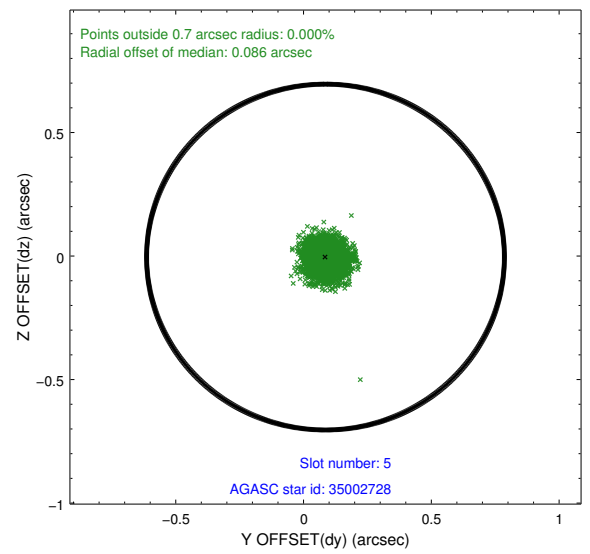
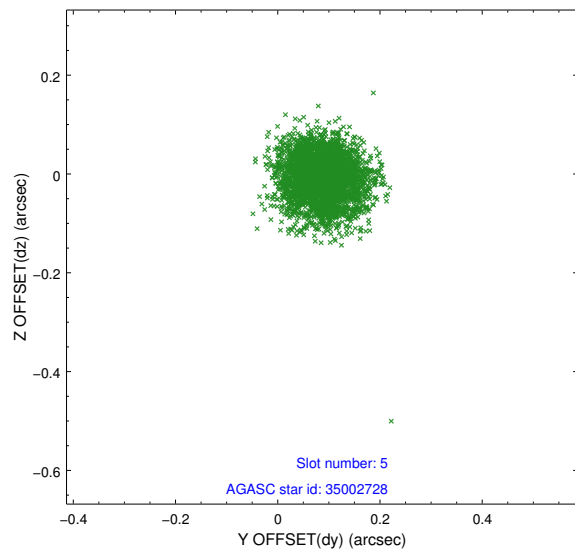
### 2.4.3 Slot 4



Time (s)

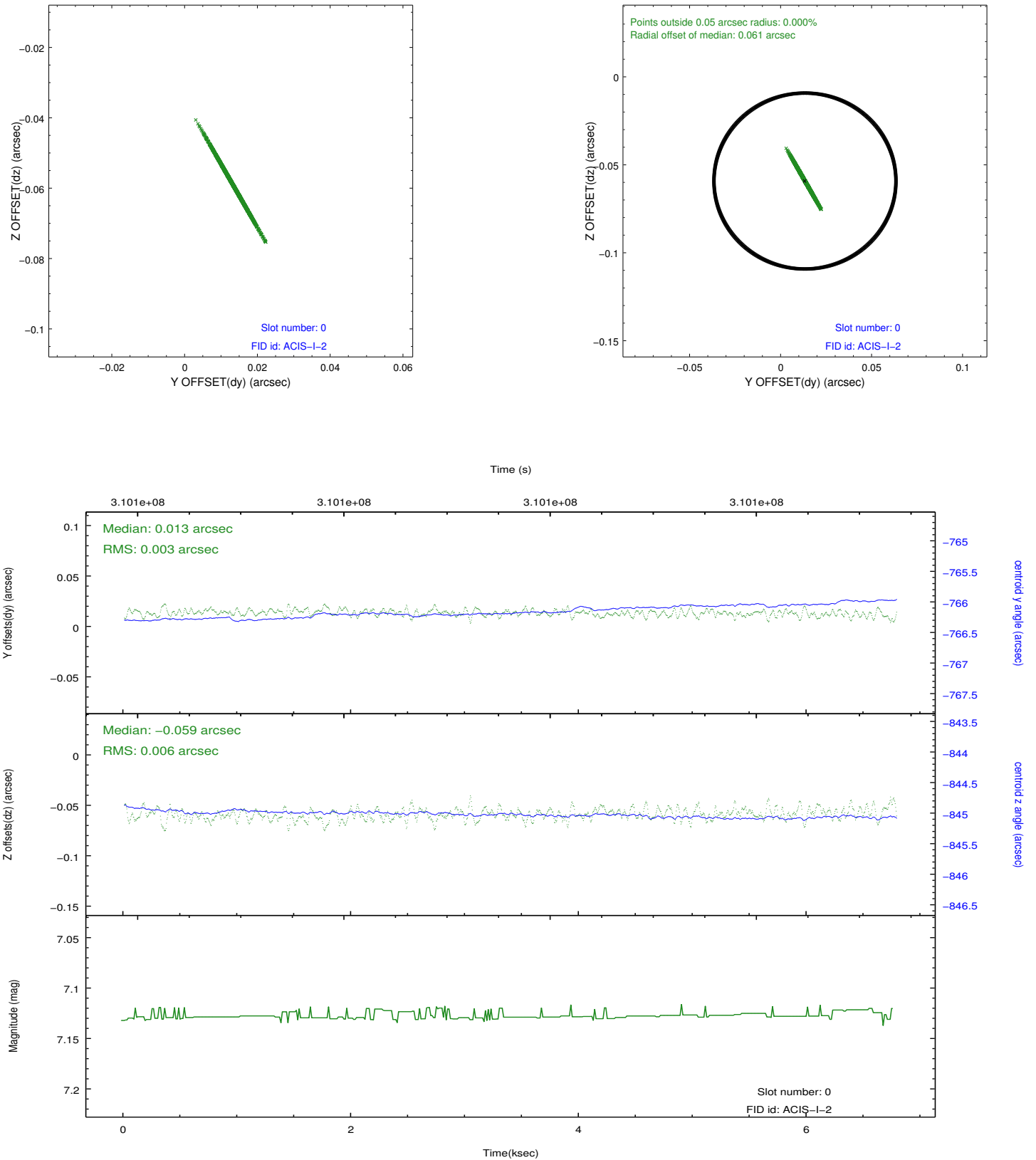


## 2.4.4 Slot 5

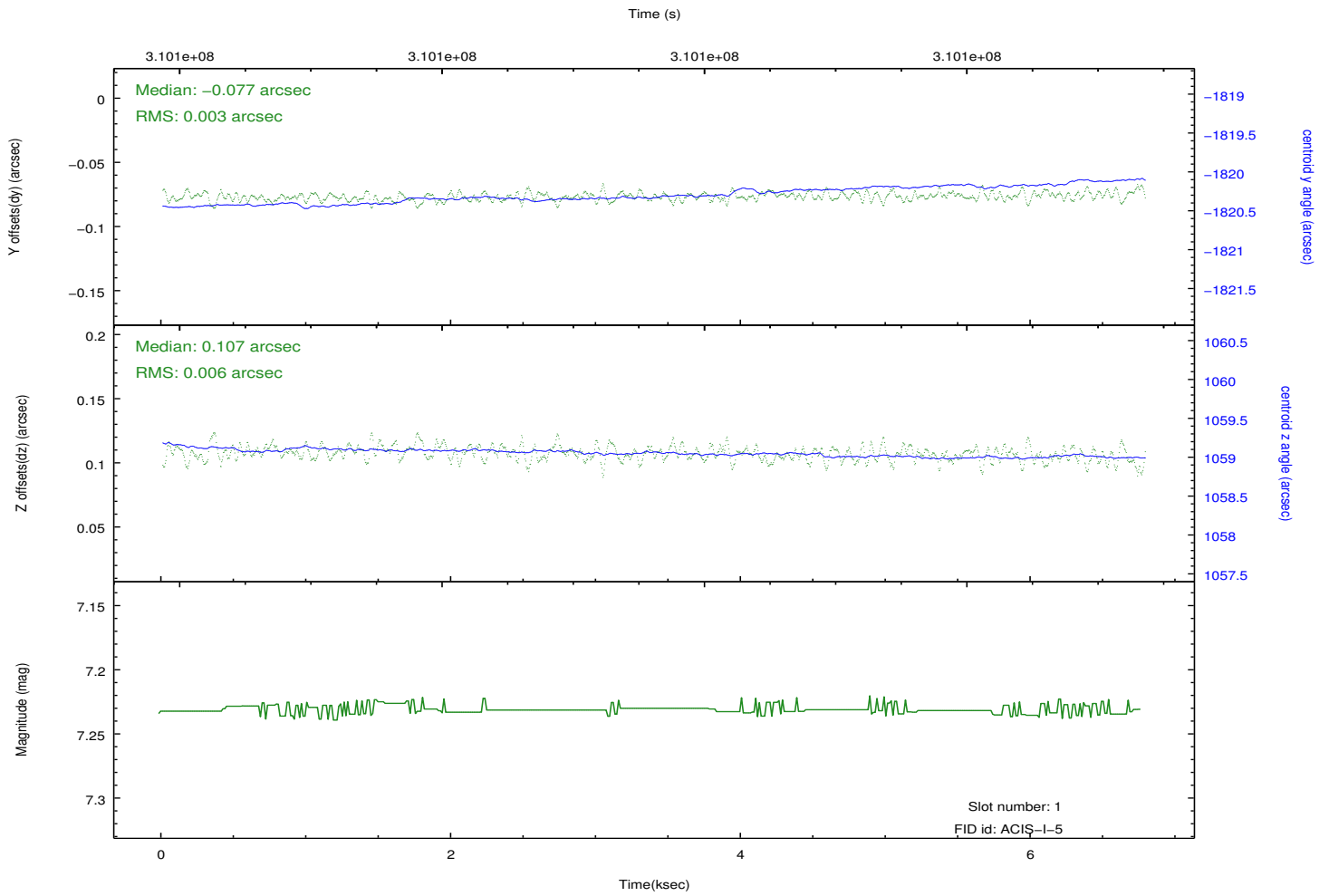
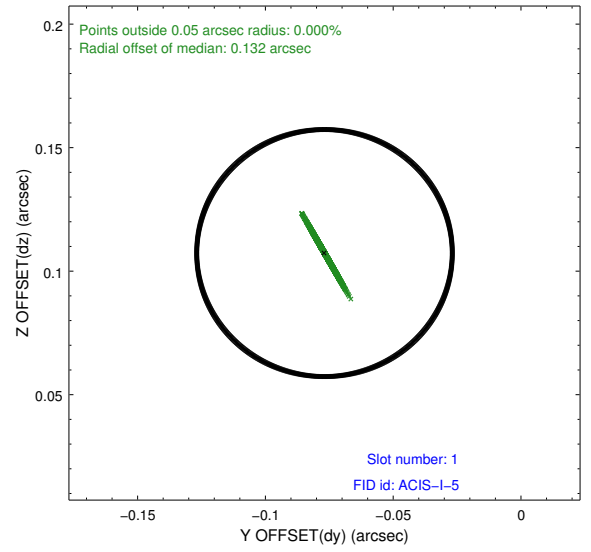
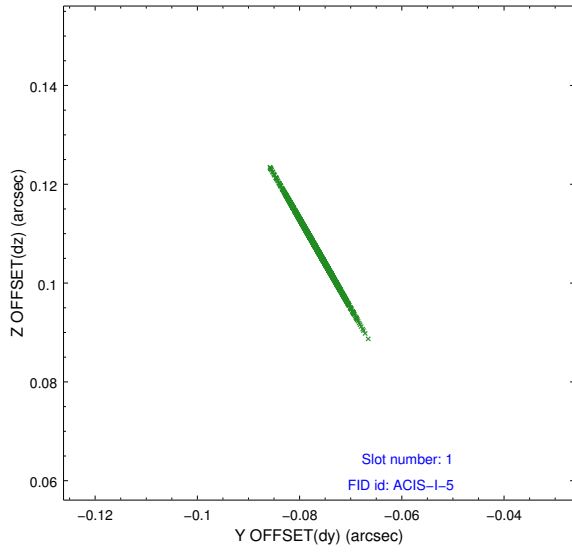


## 2.5 FID Slots

### 2.5.1 Slot 0



## 2.5.2 Slot 1



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2012.05.14
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	6.78420004

## A.2 Comments

Window preference met.

Slot 6 was not utilized in this observation.

The guide star in slot 7 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this star from the solution.